COST-PLUS-INCENTIVE-FEE
RESEARCH & DEVELOPMENT CONTRACT

Contract No. TBD

BETWEEN

CALIFORNIA INSTITUTE OF TECHNOLOGY
JET PROPULSION LABORATORY
(The "Institute" or "JPL")
4800 OAK GROVE DRIVE
PASADENA, CALIFORNIA 91109-8099

AND

SPECIMEN CONTRACT, DATED MARCH 29, 2004

THIS CONTRACT FOR

MID-INFRARED INSTRUMENT (MIRI) DEWAR SUBSYSTEM FOR THE JAMES WEBB SPACE TELESCOPE (JWST)

IS A

SUBCONTRACT UNDER JPL's NASA PRIME CONTRACT

TASK ORDER NO. 10744

A DO - C9 Rating is assigned to this Contract under DMS Regulation 1

CONTENTS

The following documents are incorporated into and made a material part of this contract.

GENERAL PROVISIONS: Cost-Reimbursement with Commercial Organizations Contract R 8/03, with Incorporated Exhibits.

- Management of Government Property in the Possession of Contractors, Form JPL 0968
- Release of Information, Form JPL 1737
- Affiliate Access Report, Form JPL 1943
- Notification to Prospective Contractors of JPL's Ethics Policies and Anti-Kickback Hotline, Form JPL 2385
- Certifications, Form JPL 2892
- Asbestos Notification, Form JPL 2895
- Notice of Potential Tax Withholding R 7/03

ADDITIONAL GENERAL PROVISIONS (AGPs)

Cost Accounting Standards and Administration of Cost Accounting Standards R 4/99

Flight Systems or Subsystems - Overtime R 3/01

Foreign Travel Reporting Requirements R 4/99

Helium Requirement Forecast, and Required Sources for Helium R 4/99

New Technology R 8/01

Safety And Health R 4/00

PREAMBLE

This Contract, entered into {Type Date Here} by and between the CALIFORNIA INSTITUTE OF TECHNOLOGY (hereinafter called the "Institute" or "JPL"), a corporation organized and existing under the laws of the State of California, and {Type Name of Contractor Here} (hereinafter called the "Contractor"), organized and existing under the laws of the State of {Type State of Incorporation Here} and constituting a subcontract under Prime Contract NAS7-03001 between the Institute and the Government;

WITNESSETH THAT:

The Contractor agrees to furnish and deliver the supplies and perform the services set forth in this Contract for the consideration stated herein.

SCHEDULE

ARTICLE 1. STATEMENT OF WORK AND DELIVERY INSTRUCTIONS

		On or Before
1.0	The Contractor shall provide the necessary labor, materials, special tools, facilities, services, test equipment, and program management to deliver the Mid-Infrared Instrument (MIRI) dewar Subsystem. The Dewar Subsystem shall perform in accordance with the specifications set forth in Exhibit No. I, James Webb Space Telescope - Mid-Infrared Instrument Dewar Subsystem Specification, JPL D-25647. The focus of this activity is to deliver a flight-certified Dewar Subsystem that has successfully completed all major reviews and satisfied all safety, interface, integration and flight readiness requirements associated with the MIRI Instrument in accordance with Exhibit No. II, Contract Data Requirements List (CDRLs) and Data Requirements Description (DRDs) and Exhibit No. III, Applicable Documents List. Support for integration of the MIRI Dewar with the MIRI Instrument, instrument level testing and post-delivery activities through the post-launch phase shall be provided.	

In the performance of this effort, the contractor shall:

1.1	Complete the design (analyses, engineering and internal reviews), develop, fabricate, assemble, test and deliver the MIRI Dewar hardware to JPL consistent with the MIRI Instrument Integration schedule, shown in section (5.0). The Dewar Subsystem deliverables for the MIRI Instrument consist of the following major assemblies:	
1.1.1	Flight Model (FM) Dewar	March 2008
1.1.2	Flight Dewar Control Electronics (DCE) and S/W	March 2008
1.1.3	Engineering Test Unit (ETU) Dewar together with the ETU Fill and Drain, and the STM Vent	June 2007
1.1.4	Structural Thermal Model Dewar Control Electronics (STMDCE):	Sept. 2007
1.1.5	Test Harness/cabling between the DCE and Dewar	TBD
1.1.6	Mechanical and Cryogenic Ground Support and Handling Equipment	Mar. 2008

		On or Before
1.1.7	Engineering Model DCE	TBD
1.1.8	EGSE for the DCE to simulate the communication and Dewar interfaces of the DCE	TBD
1.1.9	Dewar Housekeeping Electronics (DHE)	Sept. 2007
1.2	Develop the Specification for the flight harness between the DCE and the Dewar. Note, this harness will be Government Furnished Equipment (GFE).	March 2005
1.3	Identify and perform all developmental tests, as required, to resolve engineering issues and/or demonstrate an acceptable level of risk for all subassemblies to establish a level of technology maturity sufficient to complete the final design. Results shall be reported at Technical Interchange Meetings (TIMs) and/or other reviews.	As Required
1.4	Prepare engineering sketches, diagrams, schematics and drawings, including procedures and specifications of materials and processes, in both PDF and native format (Solidworks-TBR), that describe the MIRI Dewar Subsystem, Ground Support Equipment, handling fixtures, and Dewar Subsystem interfaces; and complete design layouts (location of system components) and interface control documentation inputs including a definition of interfaces with the ISIM and MIRI Instrument (mechanical – FM Dewar and Dewar Control Electronics; electrical - power, grounds, grounding, shielding, circuit protection/fusing, heaters, control, and instrumentation). This documentation shall be prepared for the following milestones:	
1.4.1	Preliminary design layouts and assembly drawings (PDR Milestone)	30 days before PDR
1.4.2	Final design layouts and assembly drawings (CDR Milestone)	30 days before CDR
1.4.3	Released design layouts and assembly drawings (Pre-Integrated Test Readiness Review)	TBD
1.4.4	‘As-Built’ design layouts and assembly drawings (Pre-Ship Review)	TBD
1.5	Provide integration support, analyses, investigations, and planning activities; and prepare all the documentation required for integration of the Dewar subsystem hardware with the MIRI Instrument.	01/09

		On or Before
	subsystem hardware with the MIRI Instrument.	
1.6	Complete safety and reliability analyses and investigations, and prepare all documentation required to show compliance with applicable safety requirements. Provide documentation needed to support MIRI Instrument Safety Reviews (Phases 0/I, II and III), including both ground and flight.	TBD
1.7	Provide drawings, procedures and specifications for ground tests and support equipment required in carrying out the ground support integration and launch preparation activities at GSFC (JPL), and the launch site.	TBD
1.8	Support on an as-needed basis (60 days at GSFC; 30 days at Plum Brook; 30 days at Kourou; 10 days at NGST (TBR)) to resolve interface control issues; to provide materials (i.e., test equipment, connectors, cables, and special tools) and services; and to perform Dewar integration and test and launch preparation activities at JPL (TBD, GSFC) and the launch site.	01/09 GSFC 01/10 PB 08/10 NGST 06/11 Kourou
1.9	Provide support equipment and handling fixtures necessary to characterize the MIRI Dewar Subsystem performance and to integrate the Dewar with the MIRI Instrument (Note: Ground Support Equipment (GSE) will accompany flight hardware to launch site.) Provide support equipment as needed to run the Dewar ETU during thermal test. This includes, but is not limited to:	45 days before PITRR
1.9.1	Specialized test hardware, including ground-service station and vent fixtures; electronics, software, and cabling to allow the Dewar to be fully exercised at its mounting, power, firmware, command and data interfaces; (Note: supplied equipment that will be used during integration and at the launch site will have to operate from 120VAC, single-phase, 60 Hz power; and 240VAC, three-phase, 60 Hz power; and 220VAC, single-phase, 50 Hz power; and 380VAC, three-phase, 50 Hz power).	
1.9.2	Electrical GSE that provides: power conversion capability to allow operation of the Dewar from 120VAC, single-phase, 60 Hz power; 240VAC, three-phase, 60 Hz power; 220VAC, single-phase, 50 Hz power; and 380VAC, three-phase, 50 Hz power instrument interface simulation capability, and specialized electrical test equipment. The EGSE shall meet the requirements of the Specification.	
1.9.3	Re-usable handling/transfer fixture(s), test fixture(s), and shipping/storage fixture and containers for all STM, ETU, and FMs.	

On or Before

1.9.3.1 Any handling fixture/storage container that must accompany the Dewar hardware into a cleanroom area shall be cleanroom compatible.

1.9.3.2 The shipping/storage container(s) shall provide a protective environment (ESD, shock, vibration, contamination, temperature variations, and humidity) for the hardware to ensure that the hardware will be maintained in such a condition that it will perform as intended and meet its requirements.

1.9.3.3 The shipping/storage container(s) shall incorporate sensors and instrumentation of sufficient nature to allow the assessment of whether the hardware was exposed to conditions outside its allowable limits.

1.9.3.4 All shipping container(s) in excess of 22kg gross weight shall incorporate forklift and/or crane lift attach points.

1.9.3.5 All shipping container(s) in excess of TBD dimensions/gross weight that must be used in a cleanroom area shall incorporate mounting interfaces for attachment of GSFC JWST Project provided pneumatic pads.

1.9.3.6 All handling fixture(s) shall be designed and fabricated to allow the hardware to result in a center of gravity that creates no significant overturning moments, and permits correct alignment, indexing, and clocking to the ISIM bolt pattern interface.

1.9.3.7 Anti-Static plastic bags, plugs, covers and caps, as required, for contamination control.

1.10 Complete a Dewar Subsystem level test in the flight configuration using the flight cryogen to characterize the MIRI Dewar Subsystem performance and operational parameters/limits/time constants. Completion of the test includes, but is not limited to providing program plans, analytical models, and verification documentation for JPL approval to verify and certify that the Dewar Subsystem has been fabricated, assembled, and tested in accordance with Exhibits Nos. I and II. A complete test cryogen must be also be completed and documented as described above.

1.11 Generate and document the necessary soft/firm-ware to check out, monitor and operate the Dewar Subsystem and process data to the MIRI Instrument for both the flight and ground configurations. This includes, but is not limited to a Command & Telemetry Handbook to describe the structures and

On or Before

format of all Dewar commands and the structure and contents of high- and low-rate telemetry packets.

1.12 Provide a User's Guide and Operating Manual for the FM Dewar, FM DCE, ETU Dewar and STM DCE that includes both hardware and soft/firm ware, as required. A draft of the User's Guide and Operating Manual shall be developed and submitted for review at the PDR. The final User's Guide and Operating Manual shall be completed by the PITRR. Additionally, for soft/firm-ware the Contractor shall provide a Release Description Document for the PSR.

1.13 Provide the following personnel and support as a minimum to support this effort in addition to that described above:

1.13.1 A Program Manager who shall provide the direction and have the control necessary to ensure effective management of the Specimen Contract. This Manager shall be vested with sufficient authority within the Contractor's organization to ensure timely and efficient application of the Contractor's resources to the requirements of this Contract. The Program Manager shall be responsible for technical progress including planning, reporting, schedule performance, financial control, hardware delivery and overall compliance with this Statement of Work (SOW).

1.13.2 At the Kickoff Meeting, perform a Requirements Review to identify and present a plan to show how the Contractor will satisfy the requirements of the SOW and Specification.

1.13.3 Maintain informal technical liaison on a weekly basis between JPL's Contract Technical Manager, and their alternate to permit JPL's timely involvement in relevant technical meetings, technical reviews, and problem solving sessions at the contractor's facility.

1.13.4 Provide weekly Status Reports by e-mail in Adobe PDF format. The monthly report shall include a brief technical status report and the monthly schedule progress and costs.

1.13.5 Conduct Monthly Management Reviews at the contractor's site based on a data package provided to JPL two days in advance of the review.

1.13.6 Provide to JPL Notification of Mandatory Inspection Points (MIPs) and Qualification/Acceptance Tests seven (7) days prior to their occurrence.

		On or Before
1.13.7	Provide for JPL review, the SOW and all applicable technical and financial reporting documents for all major subcontracts. At JPL's request, provide the plan for monitoring and visiting the subcontractor, and notify JPL of critical meetings (i.e., PDR, CDR, and PSR) to review technical progress on subcontracts.	
1.14	Complete a Technical Assistance Agreement with Rutherford Appleton Laboratories and Arianespace.	06/05
1.15	Perform travel as necessary to support the program as defined in this SOW. The Contractor shall support as necessary the following MIRI Project meetings to be held at JPL: MIRI Instrument PDR, MIRI Instrument CDR, MIRI Instrument PSR, and MIRI Instrument Pre-Launch Review(s). NOTE: MIRI Dewar Subsystem Meetings (IR/RR, PDR, CDR, PITRR, and PSR) shall be held at the Contractor's facility.	
1.16	Provide spare parts based upon a contractor-generated, JPL-approved spare parts list that may include valves, heat switches, plumbing lines, launch-hold components, fasteners, fittings, spare electrical flight assemblies (1 each), and other items as needed. (Guideline: Spares will be chosen to minimize downtime after flight hardware delivery to less than 15 days.)	
1.17	Prepare documentation and presentation packages as specified in Exhibit II entitled "Contract Data Requirements List and Data Requirement Description."	

On or Before

2.0 The following Exhibits are attached to and made a material part of this Contract:

2.1 Exhibit No. I entitled "James Webb Space Telescope - MIRI Dewar Subsystem Specification, JPL D-25647," dated March 12, 2004.

2.2 Exhibit No. II entitled "Contract Data Requirements List and Data Requirements Description," dated March 31, 2004.

2.3 Exhibit No. III entitled "Applicable Documents List," dated March 17, 2004.

		On or Before
3.0	Delivery Requirements	
3.1	Except as otherwise provided in this Contract, the point of inspection, acceptance and delivery of all supplies deliverable under this Contract shall be the Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, California 91109, or Goddard Space Flight Center, MD. All such supplies shall be packaged, packed, boxed, or crated in such a manner to ensure safe delivery and shall be shipped prepaid and at the Contractor's expense to the point of delivery.	
3.2	The Subcontractor shall furnish the cognizant JPL Negotiator with the annual and final reports of reportable items described in the Article entitled "New Technology." A copy of transmittal letters for those reports shall also be sent to the Intellectual Property Office (IPO).	Interim report every 12 months commencing on Date of Subcontract-Final Report within three months of completion of work
3.3	Form JPL 1419, "DOD Industrial Plant Equipment Requisition"	At least 30 days prior to need for acquiring or fabricating item
3.4	NASA Form 1018 (or equivalent), NASA Property in the Custody of Contractors	Three (3) Business days after reporting period
3.4.1	Quarterly Submission commencing on date of Subcontract through completion Reporting Period Oct 1 thru Dec 31 Jan 1 thru Mar 31 Apr 1 thru June 30 Jul 1 thru Sept 30	
3.4.2	Annual Submission commencing on date of Subcontract through completion Reporting Period Oct 1 thru Sept 30	Annually, Fifteen (15) Business days after reporting period
3.5	Annual Verification of Government-Owned/Subcontractor-Held Property	Annually, 30 days after receipt of list

		On or Before
		from JPL thru Subcontract Completion
3.6	NASA Form 533M "Monthly Contractor Financial Management Report"	Monthly, by the 15th of the month through Subcontract Completion
3.7	NASA Form 533Q "Quarterly Financial Management Report"	Quarterly, by the 15th of the month through Subcontract completion
3.8	Form SF 294, "Subcontracting Report for Individual Contracts	SF 294 from date of Subcontract thru March 31 and September 30 and semiannually thereafter through Subcontract completion
3.9	Form SF 295, "Summary Subcontract Report"	SF 295 from date of contract thru September 30th and annually thereafter through Subcontract completion

On or Before

4.0 JPL will:

4.1 Provide environmental qualification requirements for the hardware and soft/firm-ware.

4.2 Prepare baseline MIRI Dewar Subsystem integration requirements, identify the interfaces to be used and the associated requirements, prepare the necessary interface control documents and schematics on the JPL/EC/GSFC side of the interface, and provide information to maintain close liaison with the JPL MIRI Instrument integrators in accordance with the schedule, section (e).

4.3 Conduct and/or attend and participate in all reviews and meetings as defined in Exhibit II.

4.4 Review all documents and provide written comments or approval within thirty (30) calendar days after receipt thereof. In the event that JPL does not make a formal disposition of a given document within the thirty (30) days, the Contractor may assume that the document has been approved as submitted. In the event the plans are not approved, the Contractor shall make the necessary corrections and resubmit the plan to JPL within 10 working days.

4.5 Assist in the identification of Mandatory Inspection Points and provide review, consulting, spot-checking and guidance of the Contractor's Product Assurance and Safety Programs.

4.6 Assist the contractor in completing a Technical Assistance Agreement with Rutherford Appleton Laboratories and Arianespace; and review and approve the TAAs.

4.7 Resolve technical issues with the Contractor on a timely basis and provide in-scope technical direction, as needed, using JPL Technical Direction Memorandum (TDM), JPL form 2084-S.

4.8 Provide GFE (TBD) such as S/C simulator; all flight harnesses connecting to the DCE, including the DCE to Dewar harness and all power and communication harnesses; a Science Instrument Development Unit (SIDU); mechanical connectors; electrical connectors; and flight connector savers and covers; drill template, test-point harnesses; and break-out-boxes.

	On or Before
5.0 Schedule/Milestones	
START PHASE I	***Jun 2004***
5.1 Dewar Startup Contract Issued	Jun 2004
5.2 Kickoff Meeting	Jun 2004
5.3 Definitive Contract Issued	02 Aug 2004
MIRI Preliminary Design Review	*04 Oct 2004*
START PHASE II	***04 Oct 2004***
5.4 Dewar Preliminary Design Review	15 Dec 2004
5.5 Dewar-DCE Harness Specification	Mar 2005
5.6 TAA (RAL/Arianespace)	June 2005
JWST NAR	*Sep 2005*
5.7 Dewar Critical Design Review	Dec 2005
MIRI Critical Design Review	*28 Feb 2006*
ISIM Preliminary Design Review	*15 Mar 2006*
ISIM Critical Design Review	*14 Mar 2007*
5.8 Engineering Test Unit Dewar with ETU Fill and Drain and STM Vent	01 Jun 2007
5.9 STM DCE	Sep 2007
5.10 DHE (returned to contractor Oct 2007)	Sep 2007
5.11 Engineering Model Dewar Control Electronics (EM DCE) (returned to contractor TBR)	

		On or Before
	contractor TBR)	TBD
5.12	EGSE for the DCE (returned to contractor TBR)	TBD
5.13	Test Harnesses/Cabling (returned to contractor TBR)	TBD
5.14	Mechanical and Cryogenic Ground Support and Handling Equipment (returned to contractor TBR)	TBD
5.15	Dewar Pre-Integrated Test Readiness Review	TBD
5.16	Dewar Pre-Ship Review	TBD
5.17	Flight Model Dewar and Spare Parts	Mar 2008
5.18	Flight Dewar Control Electronics (DCE)	Mar 2008
5.19	DHE	Mar 2008
5.20	Mechanical and Cryogenic Ground Support and Handling Equipment	Mar 2008
START PHASE III		***Mar 2008***
5.21	Support for integration of Flight Dewar Subsystem (GSFC)	Jan 2009
5.22	Support for cryogenic testing (GSFC)	Jul 2009
5.23	Support for cryogenic testing (Plum Brook)	Jan 2010
5.24	Support for final integration (NGST)	Aug 2010
5.25	Support for delivery of Flight Dewar Subsystem (Kourou)	Jun 2011
JWST Pre-Ship Review		*30 Apr 2010*

	On or Before
Launch	*Aug 2011*
Commissioning	*16 Aug 2011-* *17 Feb 2012*

Notes: 1. The Contract will be split into 3 phases as shown in the schedule above.

ARTICLE 2. ALLOWABLE COSTS, INCENTIVE FEE AND PAYMENT

1.0 Estimated Cost and Maximum Incentive Fee.

Estimated Cost:

Maximum Incentive Fee:

Subject to any equitable adjustment which is otherwise provided for under the provisions of this Contract, the available incentive fee will be the maximum stated above and the amount of such fee to be actually awarded in accordance with the provisions of paragraph 4.0 of this Article. There shall be no adjustment in the amount of available incentive fee or any claim for increased incentive fee because of errors or omissions made in computing the estimated cost or the fact that the actual cost varies from the estimated cost.

The total amount allotted to this Contract is $

2.0 Incentive Fee.

Describe your Incentive Fee approach.

Catastrophic Failure

Describe your approach to include a catastrophic failure clause into the said contract.

3.0 Precontract Costs. There shall be no allowance for costs incurred prior to the date of this Contract. If this Definitive Contract has been preceded by a Letter Contract, the phrase "date of this Contract" as used in this paragraph 4.0 shall mean the effective date of the Letter Contract

4.0 Payment of Incentive Fee. Any Incentive Fee awarded will be paid upon submission of a proper invoice. Payment of any Incentive Fee will be provisional and is subject to the Dewar On-Orbit Performance based on 180 days after launch.

5.0 Billing Requirements:

All invoices submitted to JPL for the reimbursement of costs incurred for authorized work must conform to these requirements. All invoices submitted under this Subcontract should be COMMERCIAL type invoices. Billings prepared on a Public Voucher SF # 1034 form are not acceptable for payment purposes. The invoices should be numbered in a separate series for proper reference and must contain the following information:

- Subcontractor's name and address
- JPL Subcontract number
- Total Subcontract value
- Total allotted cost
- Total allotted fee
- Total allotted cost and fee
- Invoice date
- Invoice number
- Billing Period of performance

- Current and cumulative cost column
- Major cost elements
- Fixed fee earned and fee reserve/withhold
- Indirect billing rates used, pool, and bases
- Certification of invoice by authorized Subcontractor official, including printed name and telephone number

- The Subcontractor must have an adequate accounting and billing system to capture the actual costs at the authorized level as stated in the Subcontract. The Subcontractor is responsible for tracking costs and ensuring they do not exceed the authorized amount allotted for the Subcontract and, if applicable, the Contract Work Order (CWO).

- The Subcontractor is responsible for preparing and submitting invoices for reimbursement according to the terms of the Subcontract.

- Invoices shall be submitted, in triplicate, to JPL Subcontract Payment Group, M/S 601-208, 4800 Oak Grove Drive, Pasadena, California 91109.

- Each invoice shall include separate columns for current costs and fee, and cumulative costs and fee at both the Subcontract and, if applicable, the CWO summary level. Cumulative costs are necessary to ensure that the amounts billed do not exceed the total estimated ceiling costs of the Subcontract and/or the current Subcontract maximum authorized funding levels.

- Each invoice shall include current and cumulative amounts billed by major cost elements, Subcontract reserves, and adjusted amounts claimed as of the date of billings.

- **Detailed billing instructions and samples that will ensure the correct processing of your invoices can be found at the following link:**
  http://acquisition.jpl.nasa.gov/pdf/CPFF_Billing.pdf.

- When submitting an invoice for the current billing period, include both costs and fixed fee on the same invoice. A backup detail of the fixed fee earned calculation shall be submitted along with the monthly invoice to demonstrate the percentage of completion to date by the Subcontractor.

- A copy of the approved indirect billing rates applicable to this Subcontract from the Subcontractor's cognizant government auditor must be submitted with the first invoice and whenever there is a rate change. If no cognizant government auditor is assigned, submit the proposed rates to the JPL negotiator and JPL Subcontractor Audit & Compliance Group, Mail Stop 601-207. When the Subcontractor adjusts the billing rates to reflect actual year-end allowable costs, the adjusted rates shall be submitted on a separate invoice. The Subcontractor must provide notice of the updated billing rate to the JPL Supplier Payment Group. Upon submission, the invoice will be reviewed for adequacy. Any invoice found not to be in compliance with this request will be deemed inadequate and will be returned for correction and resubmission. In accordance with paragraph (a)(2) of the ALLOWABLE COST AND PAYMENT General Provision, JPL may request additional documentation to support claimed costs.

- Final annual incurred indirect cost rate proposals shall be submitted within 6 months after expiration of the Subcontractor's fiscal year, as required by the ALLOWABLE COST AND PAYMENT General Provision.

- The completion invoice shall be marked "Final". The Subcontractor should not prepare or submit the final invoice until an audit has been completed of the Subcontractor's fiscal years during which costs under this Subcontract have been incurred. A separate column shall be prepared for each of the Subcontractor's fiscal years showing the major cost elements. Any direct costs questioned as a result of the audit of costs shall be excluded from the applicable Subcontractor's fiscal year billings. Fringe, overhead, and G&A shall be computed using the final rates and listed by Subcontractor's fiscal year. Any amount billed in excess of the Subcontract value will be identified and subtracted from the total amount billed.

6.0 As assurance that a responsible official within your organization has reviewed your invoices, each invoice shall carry the following certification:

> "I hereby certify that the above bill is correct and just, that payment therefore has not been received, and that the bill is presented with the knowledge that the amount paid hereunder will become the basis of a claim against the United States Government."
>
> _____
>
> Authorized Signature
>
> (*Typed name of official*)
>
> Telephone number:

7.0 Terms of the Subcontract may necessitate billing of costs in more detail than normally required. For example, if the Subcontract provides for authorization of work by Subcontract Work Orders (CWOs), a breakdown of billings by CWO number is required. If cost control is by JPL project/task, cost detail by project/task must be furnished with invoices. In each of these examples an allocation of fee billed to CWO level of JPL project/task level would also be necessary and shall be furnished with fee billings. Also JPL may require labor hours to be submitted by category "A" & "X". Graphic, simplified examples of comprehensive cost and fee invoices and backup schedules based on the above instructions may be viewed at http://acquisition.jpl.nasa.gov/pdf/CPFF_Billing.pdf **Exhibits B-1** and **B-2**. Terms of subject Subcontract will indicate which of the schedules shall accompany your invoices.

8.0 Allowable Costs. For the purpose of determining the amounts payable to the Subcontractor under this Subcontract, the allowability of costs shall be determined in accordance with the General Provision (GP) of this Subcontract entitled "Allowable Cost and Payment;" provided, however, that in determining the allowability of costs, the advance understandings, if any, on particular items of cost set forth below shall be given effect. In the event of any inconsistency between such advance understandings and the cost principles referred to in the "Allowable Cost and Payment" GP referenced above, the cost principles shall prevail.

8.1 Direct Costs: No Advance Understanding
8.2 Indirect Costs: No Advance Understanding

ARTICLE 3. SPECIAL PROVISIONS

1.0 Assignment, Novation and Transfer

The subcontract or purchase order may be assigned, novated, or transferred to a successor-in-interest, a successor contractor to operate the Jet Propulsion Laboratory, or the Government.

2.0 Key Personnel and Facilities

The personnel and/or facilities, if any, specified below in paragraph (*) are considered essential to the work being performed hereunder. Prior to removing, replacing, or diverting any of the specified individuals or facilities, the Contractor shall notify JPL reasonably in advance and shall summit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this Contract. No diversion shall be made by the Contractor without the written consent of JPL; provided, that JPL may ratify in writing the change, and such ratification shall constitute the consent of JPL required by this Article. Paragraph (b) below may, with the consent of the Contracting parties, be amended from time to time during the course of the Contract to either add or delete personnel and/or facilities, as appropriate.

The following Contractor personnel shall be considered Key Personnel under this Contract:

*TBD

3.0 Data Removal from Computers.

The Contractor shall erase or otherwise remove all data (which can include sensitive, Privacy Act, proprietary, and mission critical data) from hard drives and other computer storage devices and remove licensed software from Government-owned computers before such computers leave the control of the Contractor organization by transfer or disposal. JPL data shall also be removed from Contractor-owned computers when the computer will be no longer used for this Contract. The Contractor shall archive all data required to be retained, pursuant to the "Rights in Data - General" Article. Guidance on what constitutes mission-critical data and sensitive information (such as business and restricted technology information and scientific, engineering, and research information) is contained in NASA Procedure and Guidelines for Security of Information Technology (NPG) 2810, available on the worldwide web or from the JPL Negotiator. Proprietary data consists of trade secrets and other commercial or financial information confidential to the individual owner or organization. Proprietary data is normally labeled as such. Trade secrets or commercial or financial information that has been released to the public or is otherwise in the possession of persons other than the individual owner or organization is in the public domain and may no longer be entitled to proprietary protection.

The Contractor shall submit to JPL a written certification that all applicable data has been erased or otherwise removed from computers when returned to JPL or disposed of.

Reference:

NASA Procedure and Guidelines for Security of Information Technology (NPG) 2810.

ARTICLE 4. OPTION PROVISION

1.0 JPL plans to negotiate separate Statement of Work(s) and option contract values (estimated cost and incentive fee) for each Phase listed below:

2.0 Phase I Basic Contract covers the period from June 1, 2004 through October 4, 2004.

Total Estimated Cost and Incentive Fee for Phase I:

3.0 Phase II covers the period from October 4, 2004 through March 2008.

Total Estimated Cost and Incentive Fee for Phase II

4.0 Phase III provides launch support from the period from March 2008 through launch August 2011 through Commissioning August 16, 2011 through February 17, 2012

Total Estimate Cost and Incentive Fee for Phase III

5.0 For each Phase, JPL reserves the right to negotiate the start and end date identified in the proposer's cost proposal and work breakdown structure to accommodate the funding profile provided by NASA for each FY'.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written.

CALIFORNIA INSTITUTE OF TECHNOLOGY

By _____
{TYPE NAME OF ACQUISITION REP HERE}

_____
(Title)

{TYPE NAME OF CONTRACTOR HERE}

By _____
(Signature)

_____
(Typed Name)

_____
(Title)

Instructions to Contractor: Do not insert date on Preamble page.